



VETASI CASE STUDY

NEXUS STREAMLINES MAINTENANCE OF NEWCASTLE'S PUBLIC TRANSPORT INFRASTRUCTURE



Moving to a centralised IBM Maximo Asset Management solution with help from Vetasi

The Challenge

Nexus manages public transport infrastructure in Tyne and Wear, including metro, bus and ferry services. Responsibility for the maintenance of this infrastructure was divided between 15 different engineering sections, each of which had its own processes and systems - making it difficult to gain an overview of operations or identify opportunities to improve service levels or cut costs.

The solution

Nexus worked with Vetasi, an IBM Business Partner, to implement IBM Maximo Asset Management and design a standardised set of maintenance processes that could be rolled out to all 15 engineering sections.

The benefits

- Enables Nexus to manage maintenance processes more intelligently: for example, the solution can calculate the distance a metro car has travelled and schedule maintenance accordingly.
- Provides a single solution for maintenance across the whole organisation, increasing consistency and visibility of data.
- Simplifies reporting processes, eliminating manual paper-based processes and spread sheets.
- Reduces hardware and IT management costs by phasing out legacy maintenance systems.

Nexus is the UK Government's Passenger Transport Executive for Tyne and Wear, and is responsible for the provision, planning and promotion of public transport in the region. The organisation runs the Tyne and Wear Metro, which carries more than 40 million passengers a year to more than 60 stations in Newcastle, Sunderland and the surrounding area. It also provides a number of early morning, late night and weekend bus services, monitors commercial bus operators, and operates the Shields Ferry crossing.

One of Nexus' most important responsibilities is to maintain the transport infrastructure and ensure that all services are kept running as reliably as possible. With such a complex and diverse infrastructure, the maintenance workload is split between 15 specialist engineering sections, each focusing on a specific area of expertise: the metro cars, the locomotives, the stations and facilities, the overhead power lines, the track and signals, the buses and bus stops, and so on.

Breaching the information silos

"Historically, each engineering section operated independently, so they all had their own systems and processes," explains Robert Fish, Asset Knowledge Manager at Nexus. "Some were using paper-based systems, some used spread sheets, and others had databases that they had developed themselves.

“If we wanted to get an overall view of operations, we had to go to each team in turn - and when they created reports, it was difficult to ensure that the data was consistent and comparable between sections. As a result, we didn’t have much visibility of costs, and we weren’t easily able to identify opportunities to streamline processes or improve service levels.”

The lack of standardisation also created other problems. For example, if an engineer moved from one section to another, they had to learn an entirely new set of systems and processes. Equally, the use of multiple IT systems inflated hardware and licensing costs, and meant that each section required its own IT experts.

Standardising maintenance processes

“We decided to create a new, standardised set of maintenance processes that would be adopted by all sections,” explains Fish. “To support this initiative, we needed to find a maintenance management system capable of maintaining a comprehensive asset database for the entire infrastructure. We also wanted to improve reporting and analytics, and to have the option of extending the solution with technologies like GIS and mobile devices in the future.

“We drew up a detailed specification and conducted a strict tendering process. We soon had a shortlist of two solutions, and we invited the vendors to run some workshops using our own data to demonstrate the capabilities of their software. Of the two options, IBM Maximo Asset Management was the superior solution for our needs.”

Proving the capabilities of Maximo

The next step was a pilot project to help the company understand the capabilities of the Maximo software and map the business processes of the different departments into a coherent set of standard processes.

“The technical aspects of the project were important, but the biggest challenge was the change in mind-set that it required from the engineers,” explains Fish. “Even little things, like standardising the terminology and making sure everyone was speaking the same language, were important hurdles. Fortunately, when people realised the possibilities of the IBM Maximo solution and started to think about the benefits, even the doubters began to come around. By the time we completed the pilot, the project had won a lot of support from managers and engineers across the organisation.”

Expert support

To help with the full implementation and roll-out of the IBM Maximo solution, Nexus chose to work with Vetasi, an IBM Business Partner that specialises in asset management and maintenance solutions.

“Vetasi were recommended by one of our other partners, and we were impressed by their credentials in the transport sector,” comments Fish. “They were fantastic throughout the initial implementation, and were prepared to be very flexible during the rollout. Their expertise with IBM Maximo was vital to the success of the project, and we hope to continue working with them to exploit additional features of Maximo in the future.”

Full functionality

IBM’s Maximo solution provides work order management, preventive and reactive maintenance, and service request management functionalities. It is also integrated with Nexus’ purchasing system to provide basic data on the cost of materials.

“The service request management module is very useful, especially for the Metro,” explains Fish. “When someone reports a problem to the network control room –a signal failure for example – they can log it as a service request and a work order is generated in Maximo

automatically. We can then monitor the problem and measure how quickly it gets resolved – giving us a useful metric for performance management.”

A more intelligent approach

Maximo has allowed Nexus to take a more intelligent approach to planned maintenance scheduling. As one example, train cars used to be serviced on a fixed schedule, regardless of how heavily they had been used. Now, Maximo calculates the distance that each carriage travels, and schedules maintenance as soon as they pass a predefined threshold. As a result of this and other innovations, Nexus expects to see fewer breakdowns and provide a more reliable service to its customers.

Moving away from specific examples and taking a higher-level view, the Maximo solution is helping to change the working culture within Nexus by eliminating manual processes and information silos, and providing a single, coherent and reliable source of maintenance-related data and processes. Engineers from all sections now have a single way of working, and the IT team has just one system to support.

“Above all, the IBM Maximo solution gives us better visibility across our whole maintenance processes, which is vital for continuous improvement,” says Fish. “If you can see what you are doing, you can identify the gaps – and once you can measure something, you can start to improve it. Maximo gives us insight into all aspects of our operations and helps us demonstrate our efficiency compared to other transport organisations – which helps us prove that we are delivering good value for taxpayers’ money.

Latest developments

Vetasi continues to support Nexus with its Maximo Asset Management system and has helped to extend its functionality to support end-to-end control of procurement and inventory, as well as managing its upgrade to Maximo V7.5. This has delivered significant functionality enhancements in the areas of asset, work, service and supply chain management, as well as giving Nexus access to all the new features of the 7.5 version of Maximo.

About Vetasi

Vetasi is an international consultancy specialising in solutions for Work & Enterprise Asset Management (EAM), IT Service Management, and Property Portfolio Management, using **IBM Maximo**, **IBM TRIRIGA** and other associated technologies.

Vetasi’s consultants have been working within the rail sector for more than 40 years’ to significantly improve asset performance and service levels for clients including Network Rail, Tube Lines, Nexus (Newcastle Regional Transport), EWS Rail (England Wales Scotland), DB Regio, BAM Rail (Netherlands) and Dubai Metro.

We carry out a huge range of work, from short assignments to complex multi-million pound projects. Whilst we are the Europe & Africa’s largest Maximo service Partner with more than 70 consultants, our key strength lies in our approach to client engagements, which is backed up by genuine industry experience.

As well as being experts in IBM Maximo and TRIRIGA, most of our senior consultants and implementation managers are highly qualified industry specialists with years’ of experience in our clients’ industries, including highly regulated, safety related sectors. This gives us a unique appreciation of our clients’ businesses and industry issues, allowing us to develop a far more effective asset management solution to meet their individual requirements.